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Author(s): Ellsworth Huntington

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## PHYSICAL ENVIRONMENT AS A FACTOR IN THE PRESENT CONDITION OF TURKEY

*By Ellsworth Huntington, Ph.D., Assistant Professor in  
Yale University*

The Turkish empire has changed its dress, but not its nature. A body diseased for a millenium cannot recover in two or three years. As Dr. Zwemer forcibly puts it, "Nothing has ended in Turkey, but something has begun." The body politic has been cleansed, and the drastic removal of the old sultan has put the country in a state where growth is possible. Constitutional government has infused new hope in despairing hearts and gives promise that if rightly nurtured it will lead to steady progress. Nevertheless the old disease is still present, ready to break out if any untoward crisis weakens the new régime.

Gathered here, as we are, to discuss the present conditions of the Near East, every participant in this conference is animated, I believe, by the sincere desire to assist in the solution of the great problems which confront the new Turkey. Nothing can aid her more than a true understanding of the causes of her weakness. Each of us has his own diagnosis, and his own remedy, whose nature depends on whether we are missionaries, diplomats, historians, educators, business men, or scientists. Doubtless each is partly wrong, but probably all of us together are nearly right. To-day I present the diagnosis of a geographer, one whose profession is the study of the relation between physical surroundings and human life. If I were to choose a text it would be from Eliot's "Turkey in Europe," that best of books on the Turks: "The crimes with which the Turks are frequently reproached, such as treachery, fratricide and wholesale cruelty, are characteristic not of them, but of the lands which they invaded." I would carry this further

and say that to an extent hitherto unrealized, the character of the Turks and other races of the empire is dependent upon past and present physical environment. I do not ignore the influence of religion, or of other psychic forces, but I believe that these cannot be rightly understood until we appreciate the part played by geographic surroundings in molding human character.

No one can travel in Turkey without seeing scores of examples of the influence of natural environment upon the inhabitants. Take, for example, the facts which came to my notice in the summer of 1909 during an hour's talk with Herr Winter, the engineer in charge of the extensive works which will soon bring water from Lake Bey Shehir to the dry plain of Konia, the ancient Axylon, in the center of Asia Minor. As we talked, four of Herr Winter's assistants one by one came into the room and were introduced. "You see what we are like," he said. "This engineer is a Greek, that one a Bulgarian, this a Belgian, and the other an Italian; another is an Armenian, and others are of still different races. The irrigation company is German; but I am the only German here, and I'm an Austrian, Our laborers are just as mixed,—Turks, Armenians, some Kurds, a few Greeks, and I don't know what else. Of course we don't understand each other. We don't try to."

Having forcibly illustrated one of the predominant results of the peculiar geographic nature of Turkey—its racial diversity,—Herr Winter proceeded to give an example of the effect of the unique conditions of Lake Bey Shehir upon the activity and thus upon the character of the inhabitants of the region. From the lake, thirty miles long, a large, clear river flows southeastward to a smaller lake, Kara Viren. At most times this second sheet has no outlet, for the water finds exit underground through several "katavothrae," or deep holes in the underlying limestone. Occasionally the holes become clogged, or the supply of water is too great to escape through them, and a stream flows out from the lake, northeastward to the Konia plain. For a thousand years or more the Turks and their predecessors have vainly striven to prevent the loss of water

through the sink-holes and turn the entire supply to the thirsty plain. They have built walls in front of the holes; have dumped load after load of earth and rock into the yawning chasms; have manufactured crude covers of beams, felt and earth; have deepened the channel at the outlet of the lake; and have wasted much energy in digging a practically horizontal canal for a dozen miles around the lake from inlet to outlet. Each attempt has failed, not from lack of initiative or energy, but because natural difficulties have been insuperable for people in Turkey's stage of development. Only the most exact modern methods of elaborate surveying afford the Germans any hope of tapping the river above the smaller lake and carrying it around to the outlet valley. To suppose that the failure to utilize the water of a single lake would have an appreciable effect upon the character of the people of Turkey would be absurd. Consider, however, the deadening effect of a thousand such failures each year for hundreds of years.

Possibly these failures have much to do with the stupidity of men like the Turk of whom Herr Winter told us. One of the engineers was talking with a peasant whose land will ultimately be irrigated. "This is a wonderful thing for you," remarked the engineer. "When we turn the water into the canals, you will get a crop of grain five times as large as now." The peasant seemed impressed. He squatted on his toes, scratched his head, rolled another cigarette and thought the matter over. Suddenly an idea, a surprising idea, struck him. He stood up, almost hastily, tightened his girdle, and remarked "Allah be praised. Do you know what I'll do? I'll sell all but one-fifth of my land, and work only one-fifth as much as now."

The Turkish pasha who dug a horizontal canal and the peasant who longed for ease arouse our mirth; yet if our ancestors had lived under similar physical conditions, we might have been equally stupid. Before discussing this subject further, let us glance at a few other characteristics inimical to progress in Turkey. Already we have mentioned three, diversity of race and language, inability to cope with the difficulties arising from the nature of the country, and a

high degree of inertia, laziness, or whatever was the quality of the peasant who proposed to sell four-fifths of his land. To quote Eliot once more, "Perhaps one fact which lies at the root of all the actions of the Turks, small and great, is that they are by nature nomads. If they quoted from the Bible instead of the Koran, no words would better characterize their manner of life than 'Here have we no continuing city.' Both in the town and in the country they think it rather strange to remain long in the same abode. Perhaps it is to this spirit that most of the vices of the Turks should be attributed. Traveling generates an immoral habit of mind; that is to say, you do many things in a place where you are going to stop only a few hours which you would not do in your permanent residence. Observe the undisguised selfishness and greed of ordinary railway travelers, the brutal violence with which they seize eligible seats or other comforts, the savage gluttony with which they ravage the buffet. So the Turk pays no attention to the inhabitants of the territory he occupies; he makes himself comfortable in his own way in whatever shelter he finds, knocks a hole in the finest fresco if he wants to run a stovepipe through the wall, or pulls down a Greek temple if he wants stones. He builds nothing but what is immediately necessary, and repairs nothing at all. Why should he? He will pass on somewhere else and take another house." No one who has traveled in the interior of Asia Minor is likely to dispute Eliot's statements. On many a summer's day I have ridden from night till morning and found the villages deserted except for a watchman or two. The inhabitants were up among the mountains or out in the plain with their sheep; or perchance were scattered in various small valleys caring for gardens which were isolated because no one spot offers sufficient water for more than a single family. Everywhere in the more remote regions the traveler in the summer meets lines of camels and donkeys laden with household stuff, the scanty goods of a score of families.

The Turk is not the only nomad of the empire. The Arabs, Kurds, Yoruks, and others are for the most part nomadic; and, where they dare, even the Armenians often

move back and forth from one abode to another. Nomadism is characteristic of the land as well as of the Turkish race.

We are often told that it is a principle of Turkish policy to keep the borders of the empire in a state of devastation, because such frontiers render it difficult for an enemy to penetrate into the country. Whether this is a fact or not, the borders certainly are in a continual state of unrest. Those who have not visited the remoter districts scarcely realize the frequency of raids, or how prominent and familiar an event they are to the native mind. In the spring of 1909 I slept one night in an Arab tent east of the Jordan. Suddenly guns sounded, dogs barked, men shouted and women shrieked. I had been within sight of raids before, but nevertheless I was excited enough to dress hastily and hurry out toward the place where a robber band, while driving off a herd of camels, had shot at the watchmen. Two old Arabs, however, guests like myself in the tent of the sheikh, merely raised their heads from the saddles which served as pillows, saw that a raid had taken place, and went to sleep again. Why should they trouble themselves about a little matter like a raid?

Among the other qualities which have always menaced Turkey and which to-day threaten all progress, misgovernment and poverty hold an important place. There is no need to picture them. The new régime has ameliorated misgovernment, temporarily at least, and the introduction of railroads and foreign enterprises will doubtless relieve poverty. Yet the process must be slow, for aside from mines and irrigable tracts such as the plain of Mesopotamia, Turkey is poor, and its agricultural resources are already almost completely utilized. Away from the main centers, the Turks and all the native races, with the exception of the Greeks on the coast and the Armenians who have been affected by missions and other foreign influences, are deeply ignorant. Worse than this, a certain hopelessness prevails, born of ages of disappointment. Moslems and Christians feel it alike. The introduction of constitutional government dispelled it for a moment, but despair once more is beginning to hang darkly over the land as

a whole. A year ago, while traveling in central Asia Minor, the most Turkish portion of the empire, I made it a practise in every village to inquire as to the new régime. "What about this new liberty?" I asked. "What difference does it make in your village? What does it mean, anyhow?" Time and again the answer was the same: "This liberty? What do we know about it? They tell us that we have it, and that everything will be all right now. Perhaps it will. God knows. But we see no difference. Oh, yes, the officials do not take so many bribes as formerly, but that won't last. They are afraid now, but you wait. They want money just as much as ever. They take as many taxes as before, and soon they will take as many bribes. They seem to want more soldiers than ever, and they take our sons to die in Yemen. We don't mind being soldiers, but Yemen! Men die like flies there. Did we vote for a man to go to Constantinople? We don't know what you mean. Oh, now we understand. Yes, a man went from the city, but we know nothing about him. Why do you ask us all these things? How can we tell about liberty? We don't know what it means. You are from the city, you have read books. *You* ought to explain to *us* what it all means. What do we know except that we are poor and God is great? Allah grant that we get enough to pay the taxes and live this dry year."

Thus far I have mentioned eight or ten characteristics of the Turkish empire, but without arranging them logically. I have purposely set them down in the accidental order naturally used by one who has no definite idea as to their origin. Now I propose to restate them in a sequence which seems logical to the geographer. Eliot appears right in putting nomadism first among the causes of the present status of Turkey. It logically leads to a second and third evil, namely, the perpetual devastation and unrest of the borderlands and some other districts, and the extreme diversity of races. Religious differences accentuate the diversity, but are not its original cause. Fourth among the characteristics of the land comes inability to cope with natural difficulties, a trait of the majority of Ottomans of whatever



race. They see the advantage of new methods, but rarely invent them. Having reached a certain degree of proficiency in utilizing the wealth of nature, they wait for foreigners to teach them how to go farther. From this proceed other evils, especially inertia, hopelessness, ignorance poverty, and misgovernment. It will be noticed that I put at the end of the list misgovernment with its attendant evils of cruelty, oppression, and treachery. I know that religious beliefs or racial traits may lead to all manner of baneful results, and that cruelty and treachery are characteristic of certain stages in the development of all races. Nevertheless the persistence of these qualities and the peculiar manner of their combination can be explained most satisfactorily as the product of physical environment.

Let us now turn to the geographic interpretation of Turkey, beginning with nomadism. Is the Turk by nature a nomad? I answer, No. Nature, herself, to be sure, has made him a nomad, but she can unmake him, for the race is still plastic. Central Asia, where his ancestors lived for thousands of years, is full of nomads now, and has contained still more in the past. Undoubtedly they scorn the sedentary life. Many of them would not settle in agricultural communities if they could, but these are the well-to-do. In every nomadic community the individuals whose flocks are small are not merely willing, but eager to practise agriculture or to engage in any other pursuit which will yield a living. They fail to become farmers, simply because the area available for agriculture is extremely limited. The settled population occupies practically every available square mile. If a few years of unusually heavy rainfall increase the arable area, the villagers promptly take advantage of it, and enlarge their fields. Time and again the cultivated area has expanded, only to contract once more with the advent of a few dry years. If the nomad would become an agriculturist, he must fight for the privilege. Outside the arable tracts, however, vast areas are clothed with grass for part of the year. In most cases such areas are deserts or steppes too dry to support crops, in others they are high plateaus covered with splendid grass in sum-



mer, but having a warm season too short for food-producing crops. In either case the regions are habitable for people who adopt the nomadic life, but not for anyone else. Hence unnumbered tribes have become nomads, not from choice, but because they could live in no other way in the districts where their lot happened to be cast. The nomadic life is precarious in the highest degree, because a shortage of grass is fatal to the flocks and herds. Hence in times of stress the nomads move in search of better pastures. Their manner of life makes it easy to travel hundreds of miles. Once started, they may keep on indefinitely, or until they find an abiding place. On the way, they come in contact with other tribes, either nomads or settled folk. War is the inevitable result. Starting from Central Asia, where desert conditions had imposed upon their ancestors the nomadic habit, the Turks, in wave after wave, moved forward until finally they found rest in Asia Minor, and pressed over into European Turkey. Naturally the habits of thousands of years stay with a race. In the struggle of generations in Central Asia the individuals of a sturdy, warlike type succeeded best, and passed on their characteristics to a progeny more numerous than that of the weaker individuals who had not the hardihood to save their flocks from danger, or to find new pastures by fighting with neighbors. In those old days laziness was no disadvantage, provided a man could arouse himself to a frenzy of activity at the critical moment. Thus the Turk became what he is, a fighter, but not a man of energy in ordinary times. The deserts of Central Asia gave him his character, and the inheritance of ages still persists.

Having seen the effect of his original physical environment in molding the Turk, we are led to ask how far the new environment of Turkey has changed him. Is he permanently endowed with the nomadic traits? I believe not. Few inhabitants of the empire make better peasants than he. Witness once more what Eliot says: "All occupations except agriculture and military service are distasteful to the true Osmanli. He does not rejoice in reclaiming barren land, or in turning the mountain-side into fruitful vineyards. But

he has a keen appreciation of the simplest and most material joys of country life. He likes fine horses, fat sheep and cattle, good corn and olives, rich grass. But more than all, he likes a good kitchen-garden, where he can grow fruit and vegetables, succulent pumpkins and cucumbers, and perhaps regale a party of friends with roast lamb in a little summer house under the shade of his mulberry and walnut trees." Eliot here describes a combination of the characteristics of the nomad and the agriculturist in just the proportions which the nature of the country would lead us to expect. In a word, since coming to Turkey, the Turkish race has sloughed off part of the habits of nomadism and assumed part of those of the true agriculturist. Nevertheless he still retains many nomadic habits, partly by inheritance and partly because portions of Asia Minor are as desert as the steppes farther east.

In many districts of Asia Minor nomadism is still a necessity. Take for example the plain of Axylon. On the edges streams from the mountains furnish water for irrigation, while the tendency of the air to rise among the hills causes a fair amount of rainfall, though in most places not enough to support forests. Hence villages are fairly numerous along the line followed by the Bagdad railway at the foot of the mountains. Out in the plain, however, the rainfall is insufficient to support an agricultural population. Grain is raised, but the harvest is precarious. In 1909 I inquired time after time, and found that the crop amounted to only from one to fourfold the seed sown. A man who obtained four or five-fold thought himself most fortunate. Occasionally a series of two or three years may be worse than 1909, as in the late sixties and early seventies. Good crops are raised in years of propitious rainfall, but the inhabitants cannot rely on this. Hence semi-nomadism is a necessity. If the people of the great Axylon plain relied solely upon agriculture, they would soon starve, or be forced to move away. Accordingly, they are pastoral; their chief reliance is great flocks of sheep and other animals. In winter the whole population gathers in large villages at the foot of the mountains, or near large springs, and the animals are sup-

ported on the grass near at hand, eked out by hay or straw stored on the tops of the flat adobe houses. During more than half the year, however, the villagers move out into the plain in little groups of from three to a dozen families. There they cultivate a part of the land on the chance of getting good crops of grain, but the main occupation is the care of the flocks and herds. Evidently nomadism is a necessity. Among the mountains the same is true; for throughout large portions of the elevated parts of Turkey grass grows well, but the climate is too dry or too cold to permit dependence upon agriculture. Hence the nomadic habit, with all that it involves of character or of modes of thought and action, has not been wholly eradicated by the migration of the Turks to their present home. Some of the invaders have become the best of agriculturists, but even in them the old mode of life is still a potent influence. Others, such as the Turkomans of late arrival, must perforce be nomads still, for nature will not permit otherwise.

Our conclusions as to nomadism explain the unrest and devastation of the Turkish borders. On the south the Arabs live in a desert which enforces the strictest nomadism. On the east, in the high Armenian plateau near the Persian border, much of the country is so cold and dry that the Kurds are necessarily nomadic, in summer at least. Even where the degree of nomadism is slight, unrest prevails, because of the sterility of the mountains. Take the case of Dersim, between the two main branches of the upper Euphrates, a mountainous tract, highly rugged, and with some peaks rising to an elevation of 10,000 feet. Dersim is far from fertile. The Kurdish inhabitants raise grain, but depend in large measure on flocks. In 1907-8 the crops were bad, and the sheep did not do so well as usual because the grass was scanty. The Kurds needed supplies from without. In the old days they would merely have robbed the neighboring villages. I myself have been in a village on the borders of Dersim when the Kurds drove off the flocks, killed a shepherd, and had a fight with the villagers. In 1908, however, having felt the strong arm of the government, they purchased grain, and made up a great caravan

to bring it home. The officials naturally said, "Now is our chance. We can strike a blow at the Kurds without injury to ourselves." The caravan was seized. As a result, the Kurds flared up, and began to rob and plunder on all sides. The authorities sent a large body of troops, 20,000 it is said, who hung around the borders of the mountains, but dared not penetrate the fastnesses. Half a million dollars, 108,000 Turkish liras, were spent by the government; but nothing was attained. The Kurds were embittered and made more ready to plunder any and all their neighbors; misgovernment was rampant for a while. The whole affair was due primarily to the mountainous, unproductive character of Dersim, which makes the Kurds semi-nomadic, exposes them to the constant danger of want, and gives them a fastness to which they can retire and defy the government. Of course the officials were foolish, but ignorance was their chief fault. They had not realized that at the bottom of the trouble lay the hunger of centuries. Half a million dollars spent in furnishing labor on public works would have enabled those particular Kurds to buy five times the food they needed and would have kept them perfectly quiet. The fundamental mistake is in assuming that the Kurds are by nature robbers, a dangerous element to be sternly repressed. The remedy lies in so adjusting matters that the evils of their physical environment shall be met.

The Albanians, and, still more, the Arabs, are in like manner the victims of circumstances. I could harrow your souls by telling how the people of the borders of the Arabian desert starved in the early seventies, while the Arabs plundered them unmercifully. In those days, by universal testimony, the Arabs pressed in from the desert by the thousand. They were hungry; their sheep and camels were weak; milk failed for the young animals; and food for the people. Therefore they scourged the starving villagers, stripping men and women of every rag, and leaving them weak and wounded to find the way home for miles in the blazing desert sun. We grow eloquent over the infernal wickedness of the Arabs, and the criminal weakness of the Turkish government in permitting such devastation within its dominions. Our eloquence is wasted.

What right have we to blame them? If we would do anything, we must show the Arab how to find food where there is no food, and the Turk how to know that the Arabs are about to be hungry and violent. If the Turkish government can find a way of helping the Arabs in times of drought, it can preserve its borders from wild desolation. It can never prevent raids so long as the raiders are spurred by hunger, and have the desert as an inviolable refuge.

The diversity of races in the Turkish empire scarcely needs explanation. Located at the apex of a vast continent, Armenia and Asia Minor, throughout the ages, have received the outwash of tribes from the desert. Forced onward by the hordes behind them, one tribe or race after another has been driven to the verge of extinction. Some have crossed to Europe; more have found refuge in the nooks and corners of the uplands. Where the mountains are highest, there the mixture of races is greatest. In the Armenian and Kurdish mountains the Turk, Armenian, Kurd, Nestorian, Kuzzilbash, Yezidi, Lar, and many another race finds shelter. The same is true of the Balkans, the Caucasus, and the region around the Pamirs. Wherever a great knot of mountains lies in the midst of regions whose physical circumstances lead to nomadism or even poverty, the remnants of defeated races gather in diverse little communities. Separated at first by race, religion and language, they are prevented from later amalgamation by the mountains themselves. Nature combines with human impulses to create diversity in rugged regions, whereas in plains she produces uniformity.

Thus far, I think, most of my hearers will agree with me. I now come to the more difficult question of the ability of the Turkish race. The Turks as a race are undoubtedly deficient in originality and enterprise. In the recent crisis they have won universal admiration; yet their own leaders are sorely troubled for fear that the good work will slacken and cease, and that the former apathy and misrule will recur, not in the old form, but with much of the old substance. If incompetence, inertia, laziness, hopelessness are necessary qualities of the Turkish race and of certain

other oriental races, the case is indeed sad. Let us investigate a few specific examples. Everyone familiar with Constantinople wonders at the desolate character of the surrounding country. On the Asiatic side the case is not so bad, for villages are fairly numerous in spite of the relatively high mountains. On the European side, however, the beautiful plateau stretching northward to the Black sea and westward for a hundred miles to Adrianople, is well-nigh uninhabited. It lies only a few hundred feet high, the soil is deep, the slopes gentle, and everything appears propitious for agriculture. Yet one may walk for miles and see nothing but flocks of sheep and at long intervals a little village in a secluded valley. To test the common opinion I made inquiries of three friends who have lived in Constantinople. All are far better informed than the average traveler, and one is among the chief authorities on the country. My inquiries took the form of a question as to why the region is so sparsely populated. The first reply was: "Lack of energy on the part of the Turks is the reason why there are no people on the plateau. They might have fine gardens there; they have them in some places around the city,—splendid ones,—and if the Turks were an energetic people they would turn the whole region into fine farms." The second reply emphasized another point: "It is because the Turks don't know how to do things wisely. They keep sheep up there on the plateau. You can see them any day close to the city, eating away, and cleaning the ground off smooth as a floor. The Turks ought to give that up, and take to farming." The third answer carried the matter still farther: "The trouble is that it is not safe outside the city. It is dangerous to go out alone there on the hills; all over the plateau the shepherds are unfriendly. Soldiers from the city go out there and insult or rob respectable citizens. So people do not like to live there. The government is to blame."

These three answers represent the common opinion not only of the people of Turkey, but of the most thoughtful foreigners. I accept all the answers as true, but they are only partial truths. They fail to strike at the root of the



matter, as my three friends agreed after we had talked the matter over, and they had themselves stated the facts on which I base my conclusion. Lack of energy, lack of knowledge, and lack of safety all seem to be in large measure the result of physical conditions. The plateau west of the Bosphorus does not blossom with gardens because it is too dry. In the spring it is beautifully green, and in exceptional years it remains verdant well toward autumn. Usually, however, it dries up at the beginning of summer. The moisture does not last long enough to insure the growth of any but the earliest crops; even grain and barley often fail. The gardens to which two of my friends referred are all irrigated, or if not irrigated are located in valleys which enjoy what may be called natural irrigation. Under present conditions water cannot possibly be brought to the main portion of the plateau, which is therefore left to semi-nomadic shepherds. Being sparsely inhabited it becomes the haunt of miscreants from the great city. Hence the lack of safety. If agriculture were profitable thousands of poor people would gladly take up farms; villages would spring up; and in a few years comparative safety would prevail. That the absence of cultivation is not due to lack of energy is proved by the fact that in the fall of 1909, when the deposition of Abdul Hamid had assured safety in the minds of many, a considerable area of the plateau not far from the city was planted with grain. The results are said to have been disappointing. The grain sprouted and grew, but not vigorously. The crop was by no means such as to tempt further expansion of agriculture. Yet 1909-10 was not one of the worst years, although not one of the best. The rainfall of Constantinople varies from 11 to 44 inches. Being influenced by winds from both the north and the south, it is very irregular. Sometimes it continues all summer, but not often. Usually the effective rains end about the first of June and begin again in September. Occasionally rain ceases, save for a few ineffective showers, as early as April, and does not begin until October. In such years agriculture without irrigation is out of the question. Dr. Washburn tells me that he has known the water supply of



Robert College to fail completely because of the withholding of rain until the end of October. The little villages on the plateau, *chiftliks*, as they are called, depend upon water from wells; and in bad years the wells sometimes go dry. Dr. Washburn has known of years when the inhabitants of certain villages were forced to carry water long distances for their own use, while their cattle suffered greatly from thirst. When two or three years with a rainfall of fifteen inches or less occur in succession much distress ensues. Famine does not occur because the people of the plateau rely largely on their flocks and because they can get work in the great city. Clearly, however, the reason for the sparse population and lack of safety of the regions immediately around Constantinople is primarily the irregularity of the rainfall, which makes agriculture highly precarious.

As to the effect of this on the lack of energy and lack of knowledge so prevalent in Turkey, a little further explanation is necessary. As I drove one day over the plain of Axylon, northeast of Konia, the parched land changed in appearance, and began to be clothed with short, thick green grass. After a few miles we were in the midst of a verdant plain stretching indefinitely on every side. Yet not a trace of a village or field could we see, nothing but the tents or little mud huts of nomads. Hitherto my Greek driver had not been sparing of opprobrious epithets, but now he broke out with renewed exclamations at the laziness, ignorance, and incompetence of the poor swine who inhabited the plain. "Look at this fine plain," he exclaimed. "See how green it is. Look at that brook. If only some Greeks were here, or even some Muhajir Turks, they would make a perfect garden of this. But these vile Turks. What do they know? They are animals without a speck of sense in their heads." His remarks threw light on two points. In the first place he had no theory as to the incompetence of the Turks as a race on matters of agriculture. Muhajir Turks are those who have lately come from Roumania or other European regions, driven away by the change from Turkish to Christian government since 1876. Racially, they are as pure as almost any Turks, yet they are rightly deemed among

the best farmers in the empire. The reason is not that their ancestors were less nomadic than those of other Turks, but that they happened to settle in the relatively fertile regions of eastern Europe, where nature invited them to live a purely agricultural life, with almost nothing of the old nomadism. Hence they have changed in character.

The second point in the Greek's remark is that his mental attitude exemplifies that of almost the whole world. He failed to realize that men in the stage of development of the Turks would never leave so easily tilled a plain uncultivated unless some important physical characteristic prevented its utilization. The reason soon appeared. We spent the night with a Kurdish chief, for part of the people were Kurds and part Turks. He proudly showed me his garden. "It is hard work," he said, "to make a garden here. You see what a good little brook we have. I think we ought to have some good gardens. A few years ago I tried to make one over there. It was all right the first year, but the second season the ground became hard, and we could not make things grow. Now I am trying here, where the soil is more sandy. This is the third year. Some plants do pretty well, but I don't know why so many trees die." He took me about, pointing out the melons, carrots, cabbages and other vegetables, as well as various fruit trees. Some species seemed thriving, but many were stunted, and about half the trees had died after the first year. Later I visited another garden in the same neighborhood. It was only two years old, but had suffered more than its neighbor four or five miles away. The reason was plain. We were in the bed of an ancient salt lake. The soil was strongly impregnated with salt, and the water of the brooks was somewhat saline. Irrigation concentrated the salt, as it always does, and after a few years rendered the ground unfit for plants of any kind except coarse grasses. The attempts of the two Kurds do not seem to be the first of their kind. We saw traces of former gardens; marked in several places by willow trees which survive where a running stream keeps the soil washed comparatively free from salt. In no case, however, has cultivation proved successful.

The moral of the Kurdish gardens is evident; but before speaking of it, I wish to cite an incident at Beersheba, the most southerly inhabited town of Palestine on the edge of the desert. A young official there told me that he and two partners had attempted to raise grain wholesale. Seeing many square miles of good land lying unused, they leased from the government a large tract at a rental of about \$2000 a year. In 1908 they planted several acres and reaped an excellent crop. The next year they increased the area, hiring many laborers, and investing all that they could in the venture. The spring of 1909 was unpropitious, for no rain fell from February till the end of April. When I visited Beersheba at the close of April the fields, which ought to have been at their best, looked almost as if they had never been planted. No attempt was made to reap the crop. Each man lost \$1500 or more that year, which is as much for the East as eight or ten thousand would be for us.

The untilled lands of Constantinople, the stunted Kurdish gardens, and the withered crop of Beersheba are not isolated instances. They represent the constant experience of the Turkish empire. On all sides men are trying to improve their condition, but fail because of natural obstacles over which they have no control, or which they do not comprehend. In these days the number of attempts is small compared with what we should make if suddenly transferred thither, but it is surprisingly large in view of the failures of the past. No man can be blamed if nature refuses to coöperate with him. With us nature may not always be so pliable as we might wish, but she rarely fails us utterly. Exertion on our part almost always brings reward. Thus we are encouraged to new efforts, and are fast learning to master highly unpropitious circumstances. With the people of Turkey the case has been different. For a thousand years they have found themselves face to face with difficulties too great for the capacity of any race save those who, under more favorable circumstances, have reached a high state of knowledge. No wonder the Turk has grown inert and hopeless. Each failure such as that of the man at Beersheba

or of the Kurds of the Axylon has been known to hundreds of the surrounding people, and has deterred them from similar attempts. "What is the use?" has been the constant question. "If we try we shall only fail." Hence fatalism has found ready acceptance and has become part of the mental equipment of every Turk. Not merely have failures been frequent, but there have been few successes such as those which are so stimulating in America. Hence poverty prevails and adds its benumbing influence.

The government of an inert, unenergetic, hopeless, poverty-stricken land can scarcely be expected to be good. Human greed is not lessened by misfortune. Nor are governmental demands for taxes diminished in times of hunger; on the contrary they increase, for rebellion, invasion, and sedition are rife at such periods. When the peasants have little or nothing with which to pay taxes, the officials also are in danger of poverty; no wonder they practice extortion and cruelty. I am not apologizing for these weaknesses, nor palliating them. I am simply striving to show their cause, or at least to show how one great cause has failed to receive its proper valuation. Physical environment is certainly responsible for some of the mental and moral qualities which hinder the advance of Turkey.

I know that many of my hearers will object to this conclusion. "What of religion?" they will ask. "Is not Mohammedanism much more potent than physical environment as a cause of evil? Are not the Greeks and Armenians ahead of the Turks, because of the difference in religion?" To answer the last question first, if the Christian races are ahead of the Turks, I believe it is due in good measure to Christianity, but other things may have a share in it. In the first place the older races, the Greeks, Armenians, and so forth, did not bring with them the Turkish heritage of nomadism, or if they did, they are removed from it by thousands instead of hundreds of years. In the next place the Christians have been comparatively open to outside influences, for their community of belief with Europe has made them willing to accept ideas which the Moslems resist. On the whole, however, the innate character of the Turks may not be greatly inferior to that of the Christians; for

the Turks are by no means to be despised. Not for a moment do I question that a new faith may work wonders in an individual, but when the stimulus of the bringers of the new belief is removed, the religious condition of a community soon falls to a level commensurate with the moral fiber of the people as a whole. Witness the Abyssinian Christians, or those of parts of South America. The higher a race rises, the higher the type of religion which it is able to grasp, and the more it is stimulated by great ideas, and by the power of faith. While a race is plunged in hopelessness by adverse physical conditions, it can scarcely attain high ideals. When other conditions improve, then the race is able to assimilate higher ideas and to be elevated by them. The physical and the psychic are so intertwined that each stimulates the other, but neither can make great progress while the other is retarded.

I should be loath to have it appear that in emphasizing the influence of physical environment I minimize other influences. I simply desire that all shall receive their proper consideration. In the past the word missionary meant merely a man who went out to teach the dogmas of Christianity. At the beginning of modern missions the one thought was to preach, and to cause the people of non-Christian lands to give up their old faiths and accept Christianity. To-day the most enlightened missionaries realize that medical and educational work are as important as direct religious efforts, and some go so far as to count them even more important. Many a man who went to foreign lands to preach has spent most of his life in teaching modern methods of farming, business, or mechanics. In a word the most useful missionaries have been those who have not only preached the faith that is in them, but have combined with this an intelligent endeavor to help the backward races in their attempts to master the difficulties of nature. They have done their work empirically, that is, without a full scientific knowledge of the relation of physical environment to character, but with full faith that true progress somehow combines material, mental, and spiritual elements. The need of the world to-day is not less missionary work, but more and broader. We have spiritual, medical and

educational missionaries: we need scientific, technical, agricultural, and commercial missionaries who shall work in their lines as unselfishly and patiently as the others have worked in theirs. Above all things the world needs men of ideals who shall inspire the faint-hearted to effort, whether by a new spiritual faith, or by a successful irrigation project.

Some of my hearers, while agreeing that the views here presented give due weight to spiritual and psychic factors may think that historical facts confute the conclusions that we have reached. In the past, they say, the Turkish empire nourished a civilization far in advance of that of today,—as advanced as any of its time. If such could be the case in the past, why not to-day? The answer must be stated briefly. In a volume on "Palestine and its Transformation" I have answered it at length. Here I can merely say that long study of the problem leads me to believe that physical conditions to-day are not what they were in the past. The climate of western Asia has changed, and the change has taken place in a most irregular fashion,—sometimes rapidly, at others slowly, sometimes tending toward aridity and sometimes toward greater rainfall. On the whole, however, the tendency has been pronouncedly toward aridity, not on account of deforestation or human action, but through a cosmic transformation. Once the plateau around Constantinople was dotted with agricultural villages, whose ruins still remain to prove the change. In Syria great baths fed by streams of running water formerly existed in places which now are wholly waterless. The Greek, the Armenian and the other ancient races of Turkey attained their high civilization during the period of propitious physical environment; the unpropitious later period has seen the feeble Byzantine and Turkish empires. The agreement between the times of pronounced decadence and the times of widespread aridity is one of the strongest arguments in favor of the conclusion that the character of a race is in many respects the reflection of its physical environment. The environment may not work directly. Cases like one related to me by Dr. Washburn are common. Between Alexandretta and Aleppo lies the town of Azizieh, in the plain at the foot of Giaur Dag. Some years ago



the Turkish government found the mountaineers of Giaur Dagħ so unruly and such plunderers, that it brought them down and settled them in the abandoned ruins of Azizieh. The country appeared rich and well watered, but no one was living there. The reason speedily became apparent. The mountaineers died wholesale, cut down by fever, and soon the population was diminished by half. Many other places which once were habitable are now scourged with disease. The change of climate appears to have involved a great increase in malarial fevers, whose wide prevalence and insidious weakening effects, so physicians say, make them the most dangerous of all diseases. In this way, as well as in many others the past was more favorable than the present.

The problem of the Turkish empire is in a broad sense biological. Man, like every other animal, must adapt himself to his environment. Mental traits are quite as important as physical in the process of adaptation. The Turk has migrated from the environment of deserts; the Greeks and Armenian have descended from an environment of greater rainfall and fertility. To-day all these races are still in process of adjustment. Certain characteristics have been inherited, others are being acquired; and little by little a type is being selected adapted to the present conditions. The process of adjustment has brought out many undesirable qualities. The problem to-day is to eliminate them. The chief causes of the bad traits, so far as geographic conditions are concerned, are the lack or irregularity of rainfall, the juxtaposition of infertile regions inhabited by nomads and of fertile agricultural regions inhabited by more peaceful people, the terminal position and mountainous character of the land, which has fostered diversity of races and interests, and the change which has taken place in the water supply during the Christian era.

At first thought this array of unpropitious circumstances seems hopeless, especially if it be granted that character is largely a product of environment, and that religion itself can be degraded by adverse circumstances. Yet such is by no means the case. When the world discovered the nature of bacteria, mankind seemed at first to be utterly at their mercy. What hope had a man of escaping disease



if he breathed, ate, and drank bacteria, if he touched millions each day, and was never away from their influence? Yet now all men recognize that the road to immunity from a disease lies in a knowledge of the bacteria which occasion it. Formerly we kept the consumptive shut in a warm close house, and unconsciously fostered tubercular bacilli by every means in our power. Now we know their nature, and are able to kill them with fresh air and low temperature. Even so the people of Turkey are suffering from a disease whose exact cause is unknown. All sorts of remedies are advocated, religious, social, political, commercial. These may or may not be helpful; some may be exactly the right treatment; others may aggravate the trouble. So long as we are only partially aware of the nature of the malady, even the best remedies may be misapplied, or may fail to accomplish their full results. Physical environment seems to be a cause underlying all the others,—by no means more important than they, any more than the root is more important than the fruit, but lying below them and nourishing them even as the root nourishes the whole plant. The patient suffering from typhoid fever to-day cares little to know the nature of the typhoid bacillus; for him the prime object is to allay the fever. For the people of the future, and for those not now afflicted, the nature and actions of the typhoid bacilli are most essential problems. Doubtless the troubles of Turkey are due to spiritual and psychic bacilli as well as to physical environment. The one essential is to study all phases of the question impartially and determine the true nature of each type of malady. To tell a nation that it suffers because of the land which it inhabits may seem depressing. Yet this is far more hopeful than to say that the race is bad at the core. If outside forces are one of the main causes of the present low status of Turkey there is hope for the future. We cannot here discuss the remedies which will do away with the ill effects of physical conditions; we do not know them yet, but we are well assured that they exist. First we must discover the nature of the evils, then the cure. Even as Christ encouraged the world, so would we encourage Turkey,—“Ye shall know the truth, and the truth shall make you free.”